



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1189/1

Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Janet Lenora Engles

### 1.3. Property details

Property: LOT 7 ON DIAGRAM 95732

Local Government Area: Shire Of Gingin

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.5		Mechanical Removal	Building or Structure

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 1014: Mosaic: Low woodland; banksia / shrublands; tea-tree thickets. (Shepherd et al 2001, Hopkins et al 2001)	The area under application (1.5ha) is located within Lot 7 which is a 67ha property zoned Rural, 7.5km west of the Gingin town site. The clearing is to erect a shed and garage and to position a caravan. The area applied to be cleared was amended to 1.5ha to avoid the adjacent Resource Enhancement Wetland.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description of the vegetation to be cleared was obtained from the Land Degradation Assessment Report conducted by a Department of Agriculture and Food officer with advice that the area to be cleared was in poor condition (DEC TRIM Ref DOC2994).
Hedde Vegetation Complex: Bassendean Complex-North; low open forest and low open woodland and sedgelands. (Hedde et al. 1980)	DAWA (2006) indicates that the vegetation within the area under application is dominated by Xanthorrhoea spp., with the occasional Christmas tree (Nuytsia floribunda) and limited understorey.		

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

#### Comments

#### Proposal is not likely to be at variance to this Principle

The area under application is in a degraded condition with predominantly Balga (*Xanthorrhoea preissii*), with the occasional Christmas tree (*Nuytsia floribunda*) and minimal understorey (DAFWA 2006).

Within 10km of the area under application there are two conservation reserves Yeal Nature Reserve approximately 3.0km south-west of the area under application and Gngangara-Moore River State Forest 8.6km west south-west of the area under application, and Conservation Category and Resource Enhancement Wetlands.

Given the degraded condition and limited native species diversity it is unlikely that the area under application comprises a high level of biological diversity, or is representative of an area of higher biodiversity diversity than that of the nearby reserves and wetlands which are managed for conservation purposes.

#### Methodology

DAFWA (2006) (DEC TRIM Ref DOC2994)

GIS Databases:

- CALM Managed Lands and Water - CALM 01/07/05

- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments**      **Proposal is not likely to be at variance to this Principle**  
Aerial photography of the area indicates that the vegetation is in a degraded condition and DAFWA (2006) advise that the understorey is sparse vegetation of predominantly Balga (*Xanthorrhoea preissii*), with the occasional Christmas tree (*Nuytsia floribunda*) and minimal understorey. It is therefore considered unlikely that the vegetation to be cleared contains hollows or significant nesting habitat.

There are five Resource Enhancement Wetlands and three Conservation Category Wetlands within 1km of the area under application with higher species diversity. These wetlands would likely to be of greater habitat value than the area to be cleared. Furthermore, given the small area under application (1.5ha) this vegetation is considered unlikely to comprise of significant habitat for fauna indigenous to Western Australia.

**Methodology**      DAFWA (2006) (DEC TRIM Ref DOC2994)  
GIS Databases:  
- Gingin 1m Orthomosaic - DLI 03  
- Cadastre - DLI 1/12/05

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments**      **Proposal is not likely to be at variance to this Principle**  
There are no records of Declared Rare Flora (DRF) in the local area (10km radius). The nearest recorded DRF is located approximately 11.7km north north-east and 11.9km south-east of the proposed area.

The following Priority species are known to occur in the local area (10km radius):

- *Verticordia linleyi* subsp. *linleyi* (Priority 4),
- *Schoenus natans* (Priority 1),
- *Calytrix sylvana* (Priority 4),
- *Blennospora doliiformis* (Priority 3), and
- *Dillwynia dillwynioides* (Priority 3).

As there are no records of DRF in the local area it is unlikely that the vegetation proposed to be cleared includes or is necessary for the continued existence of rare flora.

**Methodology**      GIS databases:  
- Declared Rare and Priority Flora List - CALM 01/07/05

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments**      **Proposal is not likely to be at variance to this Principle**  
The nearest recorded Threatened Ecological Communities (TECs) are located approximately 3.6km west and 6.5km south-west of the area under application. Both of these TECs are within Conservation Category Wetlands (CCWs).

The TECs that have been identified in the upland areas of the Bassendean Supergroup (Government of Western Australia 2000) include:

- *Banksia attenuata* woodlands over species rich dense shrublands,
- Eastern *Banksia attenuata* and/or *Eucalyptus marginata* woodlands, and
- Eastern shrublands and woodlands.

As the vegetation to be cleared does not consist of *Banksia* spp. or *Eucalyptus* spp. or wetland-dependent species, it is considered unlikely that this proposal will impact upon any of these known occurrences and therefore, it is unlikely that the proposed clearing is at variance with this Principle.

**Methodology**      Government of Western Australia (2000)  
GIS Databases:  
- Environmentally Sensitive Areas - DOE 08/03/05  
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04  
- Threatened Ecological Community Database - CALM 12/04/05



**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments Proposal is not at variance to this Principle**

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000). The Vegetation Complexes in the area under application are above the recommended minimum of 30% representation.

	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation***% status	In reserves/CALM managed land
IBRA Bioregion - Swan Coastal Plain	1,529,235	657,450	43.0	Depleted	
Shire of Gingin	181,526	98,552	54.3	Least Concern	
Vegetation type:					
Beard: Unit 1014	48,359	25,871	53.5	Least Concern	10.8%
Hedde:					
Bassendean Complex North	74,147	53,384	72.0	Least Concern	27.5%

\* (Shepherd et al. 2001)

\*\* (Department of Natural Resources and Environment 2002)

Given the proposed clearing of 1.5ha is relatively small compared to the area of remnant vegetation remaining within the Region and there is 53.5% (Beard 1014) and 72% (Hedde Bassendean Complex North) (Shepherd et al. 2001) of native vegetation remaining, the vegetation proposed to be cleared is not likely to be significant as a remnant of native vegetation in the surrounding area.

**Methodology** Department of Natural Resources and Environment (2002)  
Shepherd et al. (2001)  
Hedde et al. (1980)  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal may be at variance to this Principle**

A Resource Enhancement Wetland (REW) is located approximately 10m from the south-west corner of the area under application. This wetland forms part of the Mungala wetland group (Hill et al. 1996). In addition, a number of REWs, CCWs and EPP lakes are located on surrounding properties.

There are five watercourses within 5km of the area under application including, Gingin Brook South 0.6km east, Gingin Brook 1.3km east, Quin Brook 4.8km south-west and other minor tributaries of Gingin Brook.

The area under application is located within the buffer of this wetland and therefore the native vegetation to be cleared may be growing in, or in association with, the wetland.

**Methodology** Hill et al. (1996)  
GIS Databases:  
- EPP, Lakes - DEP 21/07/04  
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04  
- Gingin 1m Orthomosaic - DLI 03  
- Rivers 250K - GA

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal is not likely to be at variance to this Principle**

The Acid Sulphate Soil risk for the area under application is mapped as Class 2 or low risk of shallow Acid Sulphate Soils.

DAFWA Land Degradation Assessment Report (2006) states the potential land degradation risks are eutrophication and wind erosion. DAFWA (2006) assessment of the proposed clearing of 1.5 hectares of native vegetation on Lot 7 on Diagram 95732 which is in a degraded condition considered it unlikely to cause

appreciable land degradation.

**Methodology** DAFWA (2006) (DEC TRIM Ref DOC2994)  
GIS Databases:  
- Acid Sulphate Soil risk map, SCP DOE 01/02/04

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
There are two conservation reserves within 10km of the area under application Yeal Nature Reserve approximately 3.0km south-west of the area under application and Gnangara-Moore River State Forest 8.6km west south-west of the area under application.

Given that the small area under application (1.5ha) is sufficiently distanced from the nearby nature reserves, and contains vegetation in a predominantly degraded condition it is considered unlikely that the clearing as proposed will have an impact on the environmental values of the nearby conservation reserves.

**Methodology** GIS databases:  
- CALM Managed Lands and Water - CALM 01/07/05

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments** **Proposal is not at variance to this Principle**  
A Resource Enhancement Wetland (REW) is located approximately 10m from the south-west corner of the area under application and a number of other REWs, CCWs and EPP lakes are located on surrounding properties. It is considered unlikely that the clearing as proposed would have an impact on these wetlands as they do not form part of the area under application. Furthermore the clearing of only 1.5ha for a shed and garage is considered unlikely to deteriorate the quality of the surface water of the adjacent Resource Enhancement Wetland.

With high annual evaporation rates of 2,000mm and low annual rainfall of 750mm there is little recharge into regional groundwater table, which at this site is between 500 mg/l and 1,000 mg/l and is considered to be fresh to marginal. The proposed clearing of 1.5ha native vegetation is unlikely to have an impact on regional groundwater considering the small size of the proposal and the magnitude of the Perth Groundwater Province (~46,600 sq km).

**Methodology** GIS Databases:  
- Evaporation Isopleths - BOM 09/98  
- Isohyets - BOM 09/98  
- Groundwater Salinity, Statewide - 22/02/00  
- EPP, Lakes - DEP 21/07/04  
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04  
- Groundwater Provinces - WRC 98

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments** **Proposal is not at variance to this Principle**  
With an average annual rainfall of 750mm and an annual evaporation rate of 2,000mm there is little surface flow during normal seasonal rains. Given the small scale of the proposed clearing (1.5ha), it is unlikely to cause or exacerbate the incidence or intensity of flooding.

**Methodology** GIS Databases:  
- Evaporation Isopleths - BOM 09/98  
- Isohyets - BOM 09/98  
- Hydrography, linear - DOE 01/02/04

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**  
A submission (2006) was received advising that the vegetation proposed to be cleared is mainly failed degraded pasture land containing scattered shrub regrowth. Considering that the clearing will have no adverse degradation effects, therefore recommending that the application be granted.

The area under application is within the Proclaimed Groundwater Area of Gingin. Therefore any abstraction of groundwater would require a licence. However, considering this application is only for Building or Structure, no licence will be necessary.



There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

**Methodology** Development approval is not required for this proposal as the property is under Rural Zoning.  
 Submission (2006) (DEC TRIM Ref DOC3544)  
 GIS databases:  
 - RIWI Act, Groundwater Areas - WRC 13/06/00  
 - RIWI Act, Surface Water Areas - WRC 18/10/02

#### 4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Building or Structure	Mechanical Removal	1.5	Grant	The application has been assessed and the clearing as proposed may be at variance to Principle f). For Principle f) a Resource Enhancement Wetland (REW) is located approximately 10m from the south-west corner of the area under application and the vegetation applied to be cleared, therefore, is located within the buffer of this wetland. However, the vegetation applied to be cleared including Balga ( <i>Xanthorrhoea preissii</i> ) and Christmas tree ( <i>Nuytsia floribunda</i> ) are not considered wetland dependent. The clearing of this vegetation therefore is not likely to impact on the REW.

The assessing officer therefore recommends that a permit should be granted.

#### 5. References

DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM Ref DOC2994.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.

Heddl, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Hill, A.L., Semenuik, C. A, Semenuik, V. Del Marco, A. (1996) Wetlands of the Swan Coastal Plain. Volume 2b, Wetland mapping, classification and evaluation. Wetland Atlas. WRC and DEP. Perth WA.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

#### 6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)

